



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION I

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By Electronic Mail: *GGill-Austern@nutter.com*

November 1, 2016

Gary L. Gill-Austern
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Re: Aerovox TSCA Comments on Phase III Remedial Action Plan, August 2016

Dear Mr. Gill-Austern:

As discussed in EPA's October 25, 2016 letter to you, EPA's TSCA program has reviewed the August 2016 Phase III Remedial Action Plan, prepared by Brown and Caldwell for compliance with the Toxic Substances Control Act and its implementing PCB regulations at 40 CFR Part 761.

EPA understands the complexity of this remedial project. However, based on the current identified Site conditions, we have identified concerns as to the recommended remedial alternatives for controlling and/or containing releases of PCBs from the Site to the Harbor. EPA's TSCA program provides the following comments and questions for AVX's consideration and response.

General Comments

1. While not specifically stated in the Phase III, it appears that AVX is considering the existing sheet pile wall as part of the remedy in that it will be containing on-site PCB-contaminated soil as well as overburden shallow groundwater from being released into the River. If so, the sheet pile wall should be clearly identified as a component of the remedy and would need to be incorporated into the long-term monitoring plan for the Site. The remedial alternatives should evaluate the integrity of the 30+ year old wall to act as a containment barrier. Further, it also should be recognized that this sheet pile wall does not extend into bedrock and thus could not function as a containment barrier for deeper contamination.

2. Remedial actions are proposed on both the Titleist and Precix properties in the Phase III. The TSCA Determination to the NTCRA as referenced in the Phase III specifically addresses only those PCBs within the “Site” as defined in the settlement agreement between EPA and AVX, not under the 21E. PCB contamination on those properties would need to be addressed under 40 CFR § 761.61(a), (b), and/or (c). In order to comply with TSCA, if addressed under subsection (a), EPA would need to review and determine if the proposed remedy met all prescriptive requirements as specified therein; if addressed under subsection (c), EPA would need to review the proposed remedy and determine if the proposed remedy, once implemented, would not result in an unreasonable risk of injury to health or the environment. Under subsection (c), EPA must issue a written decision of each risk-based plan.
3. The discussion on remedial alternatives requires additional information and refinement.
 - a. In the discussion of the proposed remedial alternatives evaluations, PCBs should be included with other Site contaminants.
 - b. PCB concentrations over 600,000 ppm were found in DNAPL in MW-15D (IRA Status Report #4, June 2015) and were reported above the Method 1 GW-3 standards for both shallow and deep overburden groundwater. However, for alternative OU4-1 (deep bedrock groundwater), PCBs were not included in the mass flux evaluation. While it is indicated that PCBs are not expected to be a large contributor, under TSCA, PCB contribution to the aquatic system, including the River sediment, must be considered in the alternative evaluation for OU4-1.
 - c. EPA is not aware of any studies showing how effective ISCO is on PCBs and/or what effect ISCO could have on PCB mobility. For OU4, there is discussion that a significant portion of the contaminated bedrock aquifer is in good hydraulic communication with the River. Given this, EPA would suggest that installation of a low permeability vertical barrier extending at some depth into bedrock combined with an active groundwater hydraulic control/treatment system should be considered/evaluated as a remedial alternative. The same argument could be applied to OU3B remedial alternatives.
 - d. For the permeable reactive barrier (PRB), it is indicated that this is not effective in treating PCBs and thus carbon will be added for PCBs. A conceptual description is needed of where and how the PRB will be installed in relationship to the River and the existing sheet piling and how the effectiveness of the PRB will be monitored. While it is mentioned that the PRB may be spent and require replacement, it does not appear that the costs were evaluated. The Phase III seems to conclude that replacement will not be necessary because there is an assumption that areas of DNAPL will be addressed through the IRA Modification. However, at least a portion of the PRB will be installed within areas of DNAPL

and tidal action results in movement of PCB-contaminated materials in both directions. As a result, failure of the PRB could occur more quickly than expected. Thus, replacement cost should be included in the remedy alternative discussion. If implemented, monitoring of the PRB will be critical, especially in those areas where DNAPL is/was detected and in places where high tidal action occurs, to determine whether the PRB is effective.

- e. EPA is concerned on how the PRB could be effected by DNAPL and there is little discussion on this in the remedial alternatives. It is indicated in the Phase III that pilot testing of the PRB will be conducted, but there is no discussion of the criteria that will be used to determine the effectiveness of this remedial action, who will make the determination, and if deemed ineffective, what the contingency would be. AVX may wish to consider a smaller bench scale test before pilot testing in the field. This may help in informing more quickly as to the viability of use of PRB at this Site.
4. One of the primary objectives of the AVX work is to contain ongoing releases to the Harbor, which is how the success should be determined. However, the measurement for how this objective is to be determined appears to be tied to the NBH Superfund Project; that is, success and permanency can only be measured once the Harbor cleanup is completed. Regardless of the EPA Harbor cleanup, AVX must implement monitoring of the selected remedial actions for overburden and bedrock groundwater, including DNAPL, to ensure migration control. It thus is not dependent upon EPA's work in the Harbor. Further, while the Phase IV will likely contain more information on the long-term monitoring, primary elements of monitoring to be conducted (to confirm actions are not impacting off-site receptors (e.g., the River) both during and following the remedial actions should be discussed in this current Phase III.
 5. DNAPL is a primary contaminant source in OU3. While mentioned briefly, remedial alternatives for OU3 do not include DNAPL. Although the IRA Modification addresses some DNAPL, given the high probability that DNAPL remains at the Site and that it is within OU3, all of the OU3 alternatives should include measures to address any remaining DNAPL encountered at the Site as part of the comprehensive cleanup. EPA is aware that AVX will be piloting one of the DNAPL extractions in the deep overburden by pumping the well using a small electrical device. This may not be an efficient method for evaluating DNAPL removal and EPA would recommend a much more rigorous pumping test for this pilot.

6. To-date, excavations have been/will be conducted in three hot spot areas, including MIP 23, UV-17, and BGP-20. These excavations are being undertaken under the August 2016 IRA Modification to remove DNAPL. MW-15 has some of the highest concentrations of DNAPL as well as TCE and PCBs, and free product recovery (FPR) is the only remedial action proposed for this area. Recent data from MIP 53 and MIP 54 (close proximity to MW15) also show high PCB concentrations in shallow soil. Based on the boring logs, no peat is present in these areas. Typically, TSCA policy would require reduction of source load in areas with these levels of concentration before capping, if feasible. Has excavation been considered to reduce the source load in these areas? If not, why?

Specific Comments

1. Pages 3-1 and 3-2. Section 3.2. OU1. With respect to the PCB concentrations at the Titleist Site, this text as well as the Phase II indicate that the initial PCB samples were collected over the 0-2 foot depth interval. Given the conceptual site model, it is likely that higher PCB concentrations are present in the shallower depth (e.g., 0-6 inches or 0-1 foot) intervals. Thus, for purposes of TSCA, EPA has concluded that additional shallower samples are necessary to confirm the nature and extent of PCB contamination on the Titleist property.
2. Page 2-5. 4th bullet. It is indicated that a peat layer is present across much of the eastern portions of the Site. However, with respect to MIP 53 and MIP 54, the peat appeared to be missing in these locations and thus, any migration from these areas towards the River does not appear to be controlled by the sheet pile wall. While these areas are proposed to be covered under remedial option OU3A-3, it is unclear if any vertical controls will also be employed. Please clarify and, if no controls are planned, please explain the basis for not including vertical controls.
3. Page 3-2 footnote. The specified cap requirements were found in Section VI(B)(1)(c) of the Action Memorandum, not VI(B)(1)(b).
4. Pages 4-2 and 4-3, Section 4.1.2.1. It is indicated that hydraulic containment and *ex-situ* treatment is effective for both overburden and bedrock groundwater. While these measures were retained for the OU3B evaluation, it is unclear why this alternative was not retained for OU4 evaluation. Given both the CVOC and PCB concentrations in the bedrock, this should be included in the evaluated options.
5. Page 8-1. Section 8.1. For the OU3A-3 preferred action, it is indicated that an asphalt cap will be constructed over soils with PCB concentrations > 2 mg/Kg. On page 4-12, for Alternative OU3A-3, it is indicated that a pavement cap will be constructed over soils with PCB concentrations greater than 1 mg/Kg. Please clarify what is proposed under this action, including the cap type and the PCB concentration.

6. In Appendix A, figures showing the DNAPL areas and cross-sections are presented. These figures show a smaller DNAPL footprint contained within the Site boundaries than previously identified by URS in 2014. These figures also do not include the area more recently identified by MIP-53 and MIP-54 and shown on other figures. Given that the DNAPL is a significant source of contamination at this Site, the Phase III should include a discussion on AVX's rationale for reducing the DNAPL footprint on the Site.

Should you have any questions, please contact me at (617) 918-1527.

Respectfully,

Kimberly N. Tisa, PCB Coordinator
Office of Site Remediation & Restoration

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